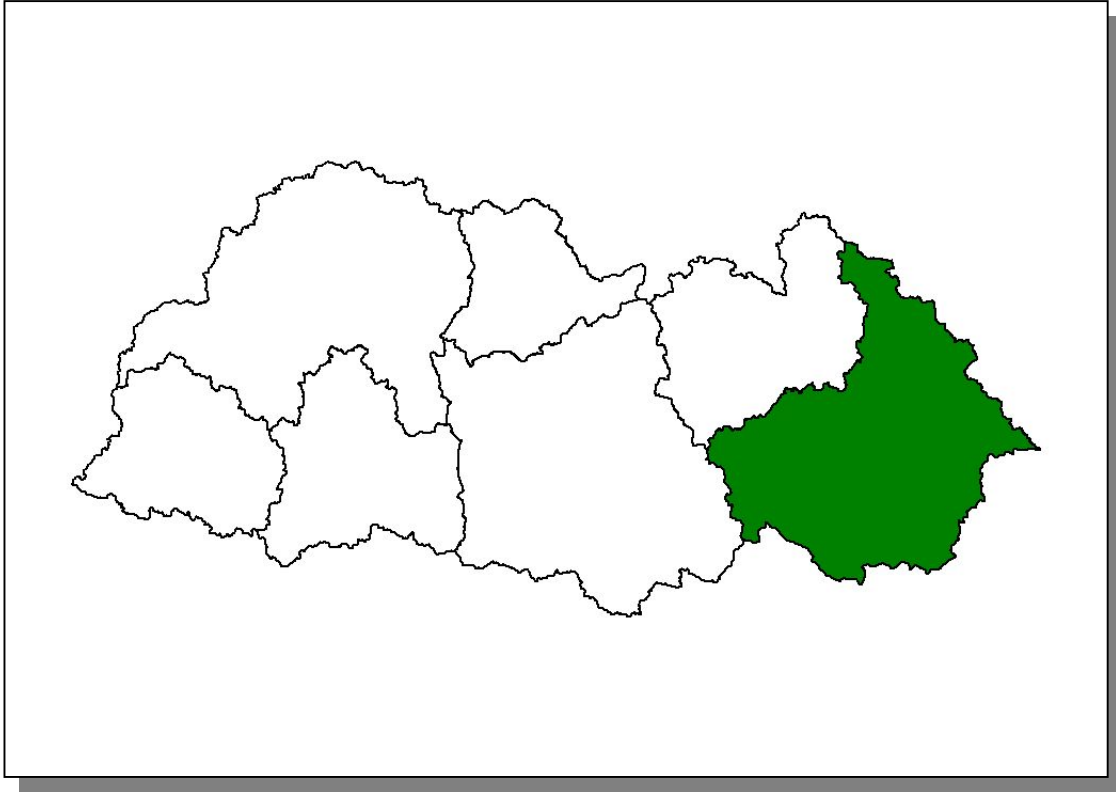
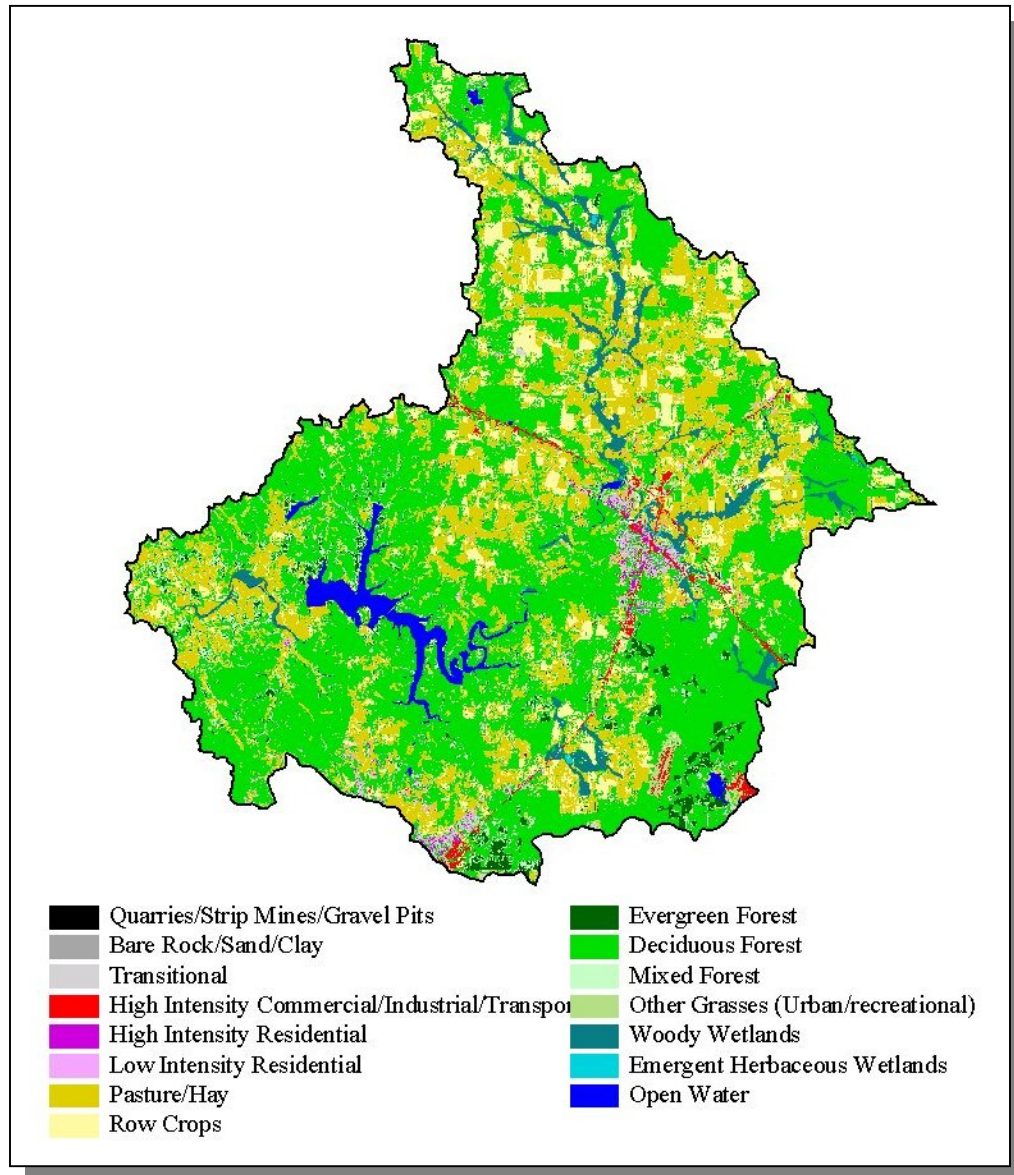


**4.2.A. 0604000201 (Duck River).**

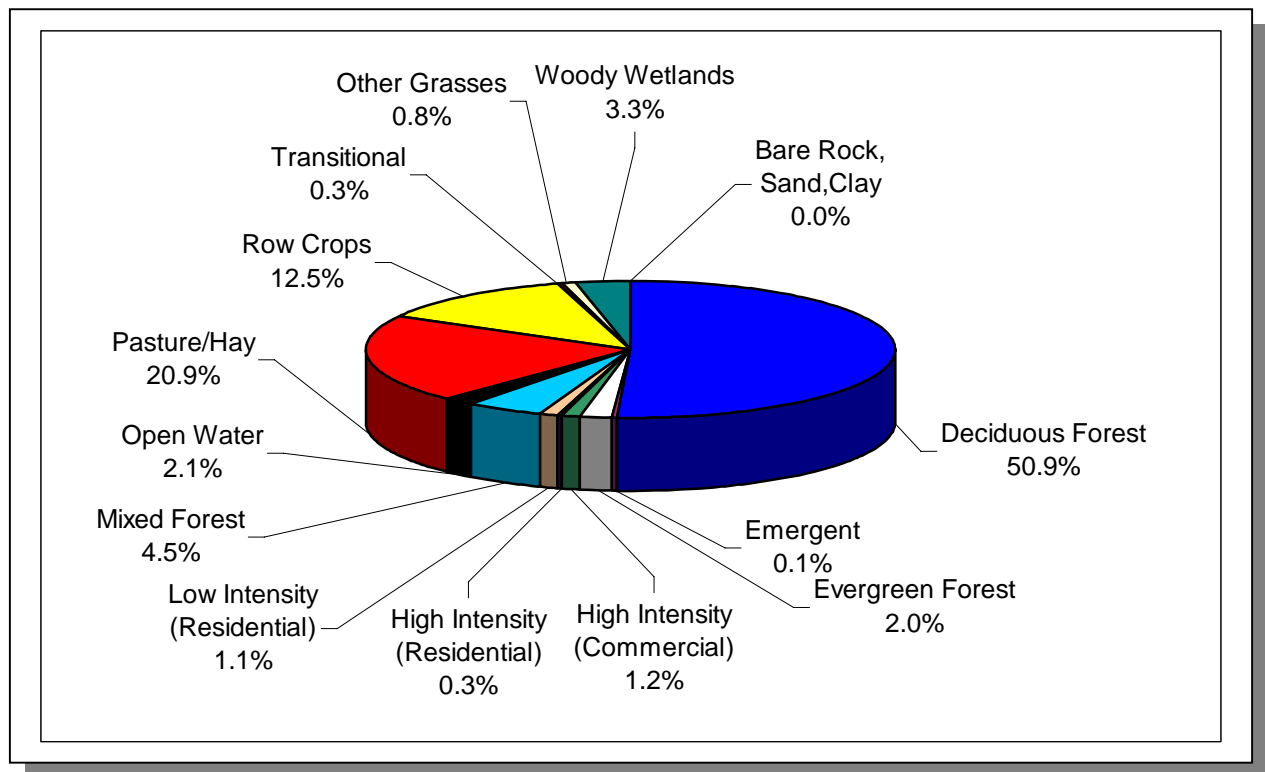


**Figure 4-2. Location of Subwatershed 0604000201.** All Upper Duck HUC-10 subwatershed boundaries are shown for reference.

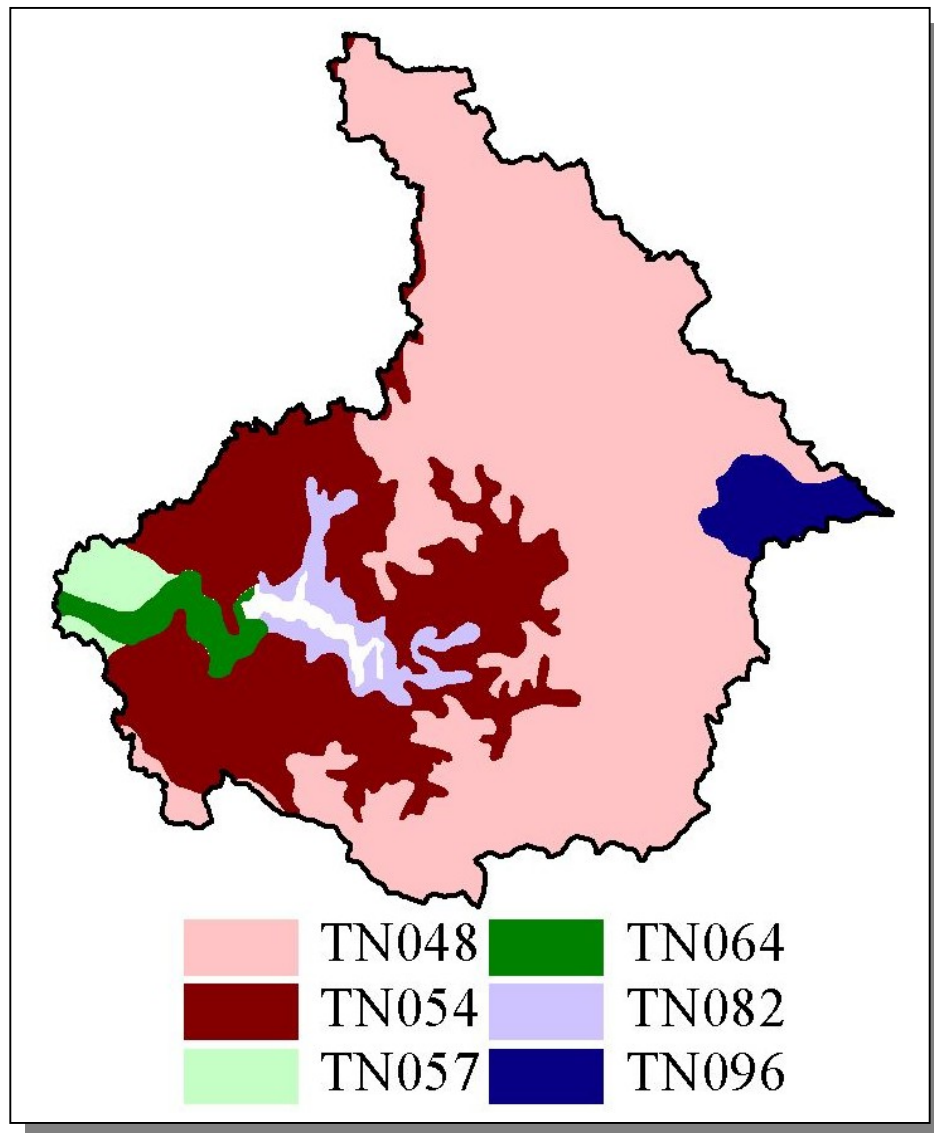
**4.2.A.i. General Description.**



**Figure 4-3. Illustration of Land Use Distribution in Subwatershed 0604000201.**



**Figure 4-4. Land Use Distribution in Subwatershed 0604000201.** More information is provided in Appendix IV.



**Figure 4-5. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000201.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN048	8.00	C	1.38	5.06	Silty Loam	0.42
TN054	0.00	C	3.04	4.84	Loam	0.32
TN057	0.00	C	1.14	5.01	Clayey Loam	0.33
TN064	7.00	C	1.19	5.82	Silty Loam	0.37
TN082	0.00	B	1.63	5.47	Loam	0.34
TN096	10.00	C	1.22	5.16	Silty Loam	0.38

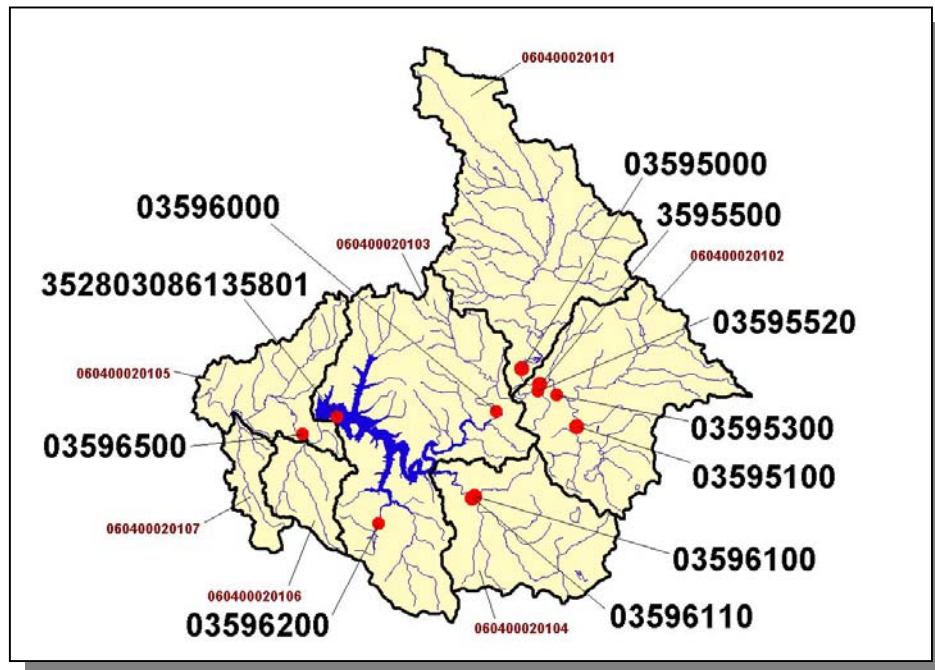
**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0604000201.** More details are provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-1997)
	1990	1997	2000		1990	1997	2000	
Bedford	30,411	34,203	37,586	5.99	1,821	2,048	2,250	23.6
Coffee	40,339	45,347	48,014	47.17	19,028	21,391	22,649	19.0
Franklin	34,275	37,152	39,270	0.22	76	81	86	13.2
Moore	4,721	5,205	5,740	2.14	101	111	123	21.8
<b>Totals</b>	<b>110,196</b>	<b>121,907</b>	<b>130,610</b>		<b>21,026</b>	<b>23,631</b>	<b>25,108</b>	<b>19.4</b>

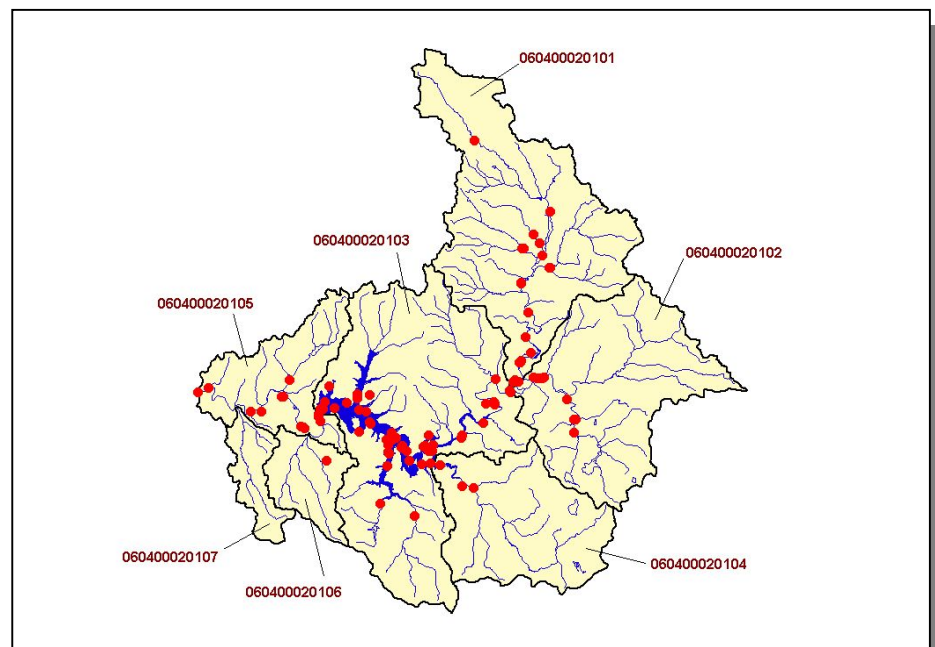
*Table 4-3. Population Estimates in Subwatershed 0604000201.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Manchester	Coffee	7,709	3,330	2,925	384	21
Normandy	Bedford	135	54	0	54	0
Tullahoma	Coffee	16,757	7,109	6,184	920	5
<b>Totals</b>		<b>24,601</b>	<b>1,0493</b>	<b>9,109</b>	<b>1,358</b>	<b>26</b>

*Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0604000201.*

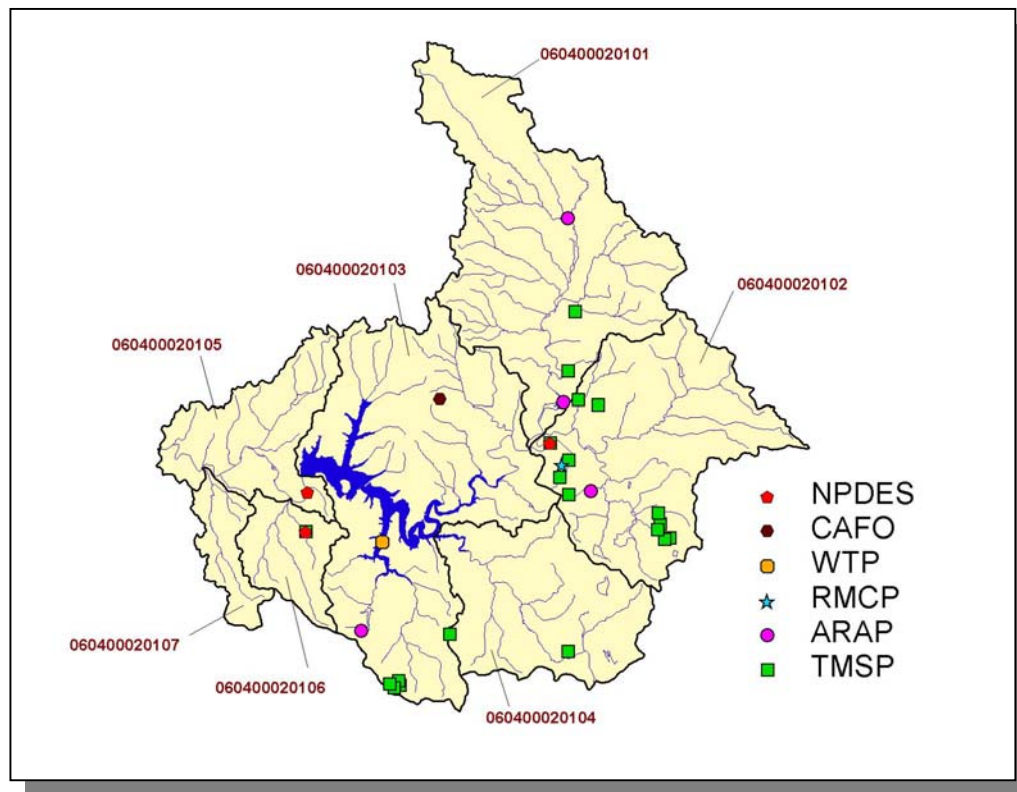


**Figure 4-6. Location of Historical Streamflow Data Collection Sites in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information is provided in Appendix IV.



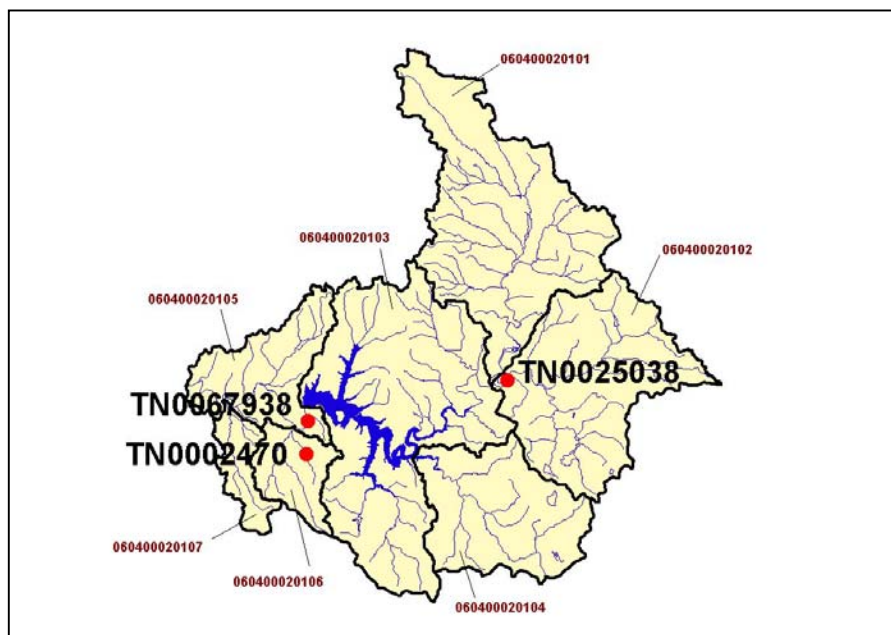
**Figure 4-7. Location of STORET Monitoring Sites in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including site names and locations, is provided in Appendix IV.

4.2.A.ii Point Source Contributions.

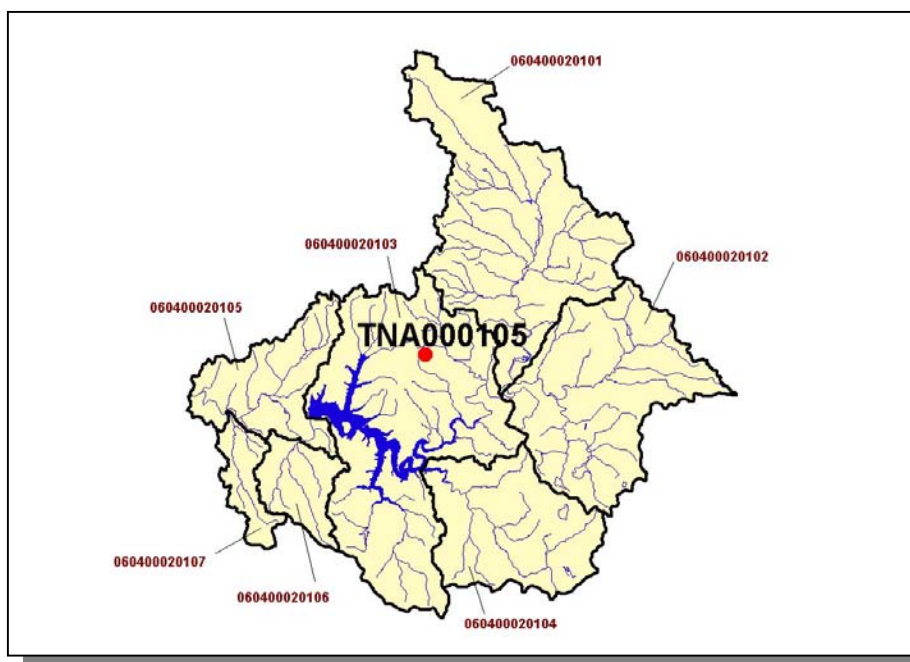


**Figure 4-8. Location of Active Point Source Facilities in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.



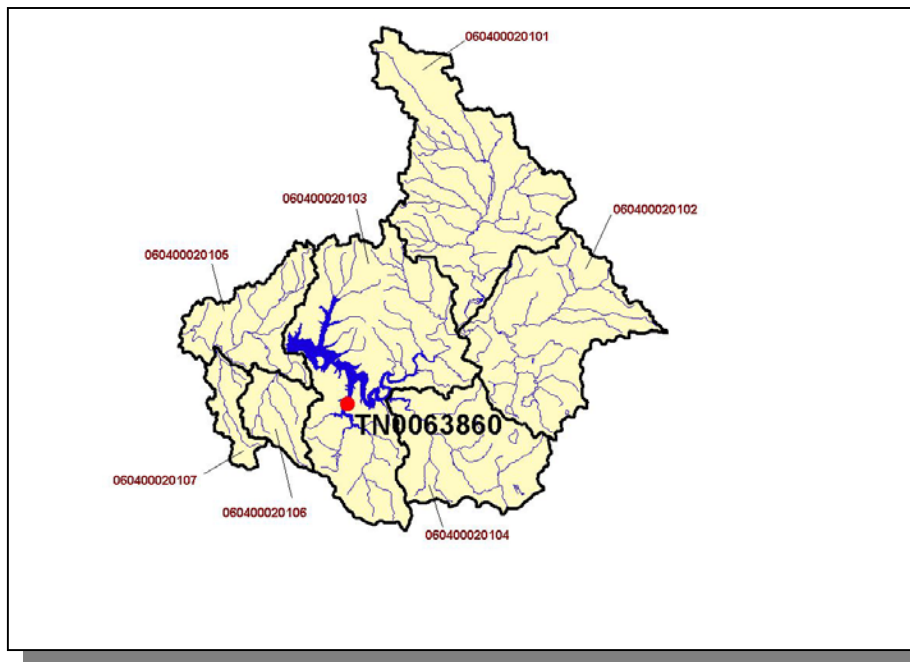


**Figure 4-9. Location of NPDES Facilities in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

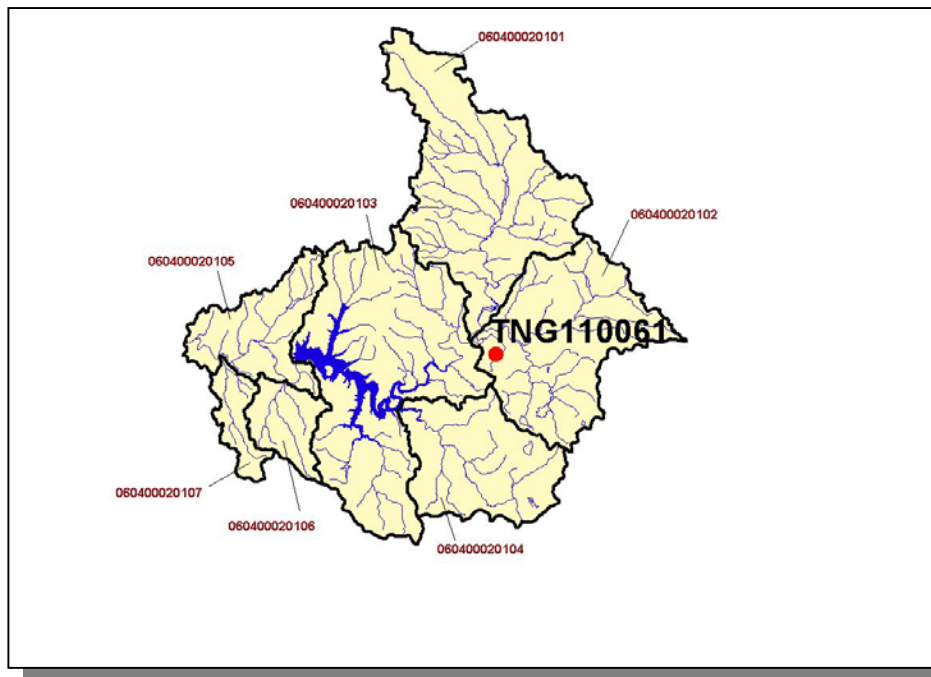


**Figure 4-10. Location of Concentrated Animal Feeding Operations (CAFO) in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

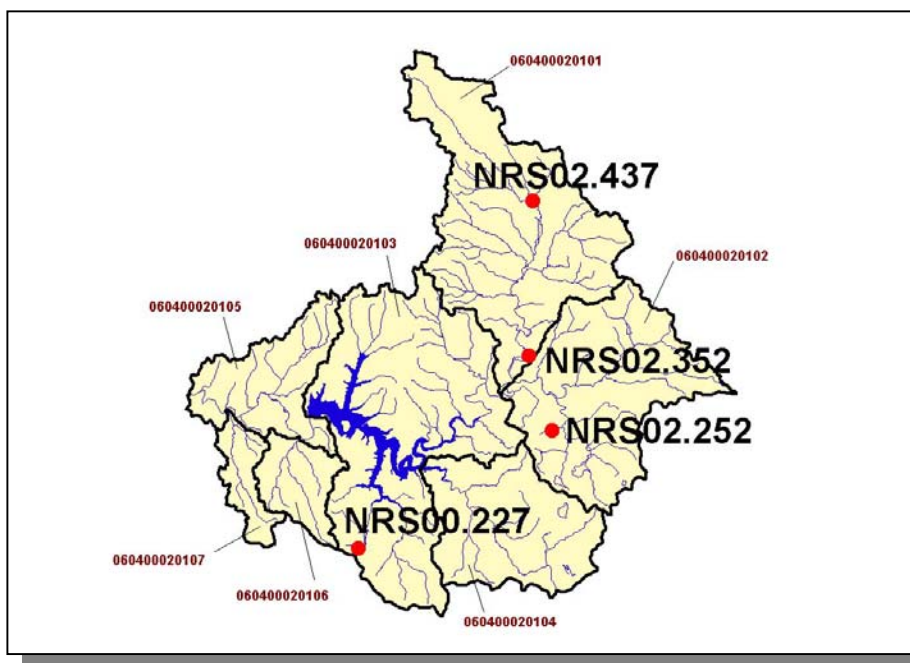




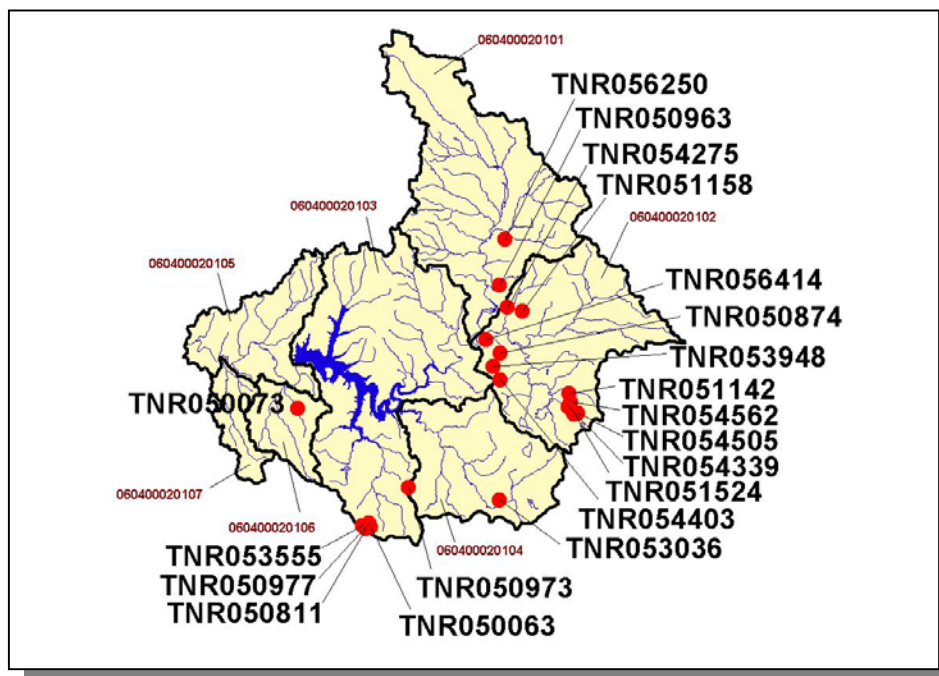
**Figure 4-11. Location of Water Treatment Plants in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-12. Location of Ready Mix Concrete Plants in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-13. Location of ARAP Sites (Individual Permits) in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

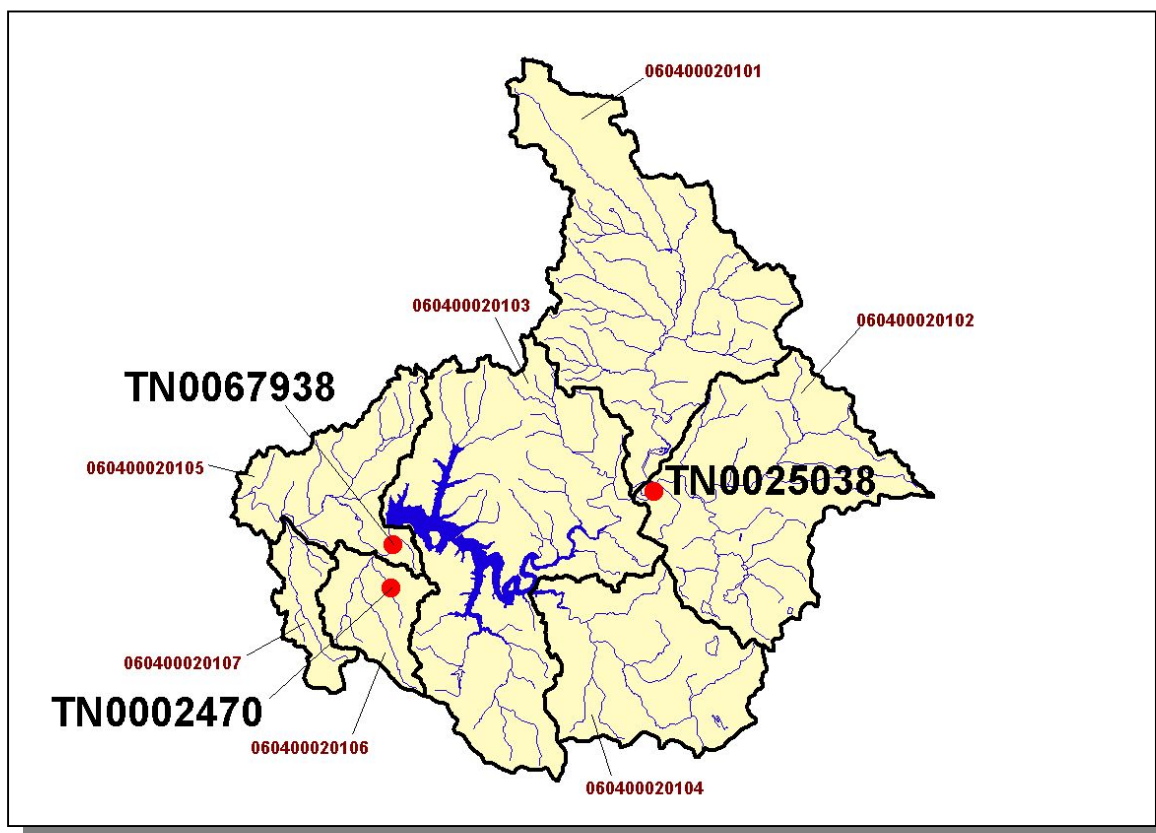


**Figure 4-14. Location of TMSP Facilities in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

**4.2.A.ii.a. Dischargers to Water Bodies Listed on the 2002 303(d) List**

There are three NPDES facilities discharging to water bodies listed on the 2002 303(d) list in Subwatershed 0604000201:

- TN0067938 (TWRA-Normandy Fish Hatchery) discharges to Duck River @ RM 248.0
- TN0025038 (Manchester STP) discharges to Duck River @ RM 268.5
- TN0002470 (Tennessee Dickel Distilling Company) discharges to Cascade Creek @ RM 0.1 to cascade Branch @ RM 1.4



**Figure 4-15. Location of NPDES Dischargers to Water Bodies Listed on the 2002 303(d) List in Subwatershed 0604000201.** Subwatershed 060400020101, 060400020102, 060400020103, 060400020104, 060400020105, 060400020106, and 060400020107 boundaries are shown for reference. More information, including the names of facilities, is provided in Appendix IV.

PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0067938	48	48	48	45	
TN0025038	11.7	12.2	13.0	10.9	3.4
TN0002470					

**Table 4-5. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000201.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	WET	CBOD <sub>5</sub>	FECAL COLIFORM	E. COLI	NH <sub>3</sub>	Cl <sup>-</sup>	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0067938	X							X	X		X
TN0025038	X	X	X	X	X		X	X	X	X	X
TN0002470						X		X	X		X

**Table 4-6. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2002 303(d) List in Subwatershed 0604000201.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids, Cl<sup>-</sup>, Dissolved Chloride.

**4.2.A.iii. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
6,418	15,967	1,396	15	2,617,260	1,416	119

**Table 4-7. Summary of Livestock Count Estimates in Subwatershed 0604000201.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Bedford	74.6	74.6	0.5	1.3
Coffee	114.4	114.2	2.8	12.7
Franklin	183.4	183.0	6.0	28.7
Moore	36.6	36.6	0.0	0.0
<b>Total</b>	<b>409.0</b>	<b>408.4</b>	<b>9.3</b>	<b>42.7</b>

**Table 4-8. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0604000201.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	1.37
Grass (Hayland)	0.82
Legumes (Hayland)	0.72
Legumes, Grass (Hayland)	0.21
Grass, Forbs, Legumes (Mixed Pasture)	0.31
Forest Land (Not Grazed)	0.00
Forest Land (Grazed)	0.00
Corn (Row Crops)	9.92
Cotton (Row Crops)	4.03
Soybeans (Row Crops)	14.90
Wheat (Close-Grown Cropland)	12.41
All Other Close-Grown Cropland	5.82
Other Vegetable and Truck Crop	4.37
Summer Fallow (Other Cropland)	4.60
Other Cropland not Planted	6.65
Other Horticulture	1.92
Conservation Reserve Program Lands	0.15
Non-Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.16

**Table 4-9. Annual Estimated Total Soil Loss in Subwatershed 0604000201.**